## Abstract

The present invention is characterized by subjecting 4,4'-diallyloxydiphenyl sulfone to a rearrangement reaction under microwave irradiation, preferably in molten state, to produce objective 3,3'-diallyl-4,4'-dihydroxydiphenyl sulfone efficiently in a short time, in high yield and in high purity. Further preferably, by carrying out said reaction in substantially oxygen-free atmosphere in the presence of at least one compound selected from a group consisting of an antioxidant, an organic basic compound and a chelate compound, the above-described object can be attained in more preferable manner.